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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/417,980	10/13/1999	LINUS TORVALDS	TRANS12	8220

7590 02/12/2004

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EXAMINER

ELLIS, RICHARD L

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/417,980

Applicant(s)

TORVALDS ET AL. 

Examin r

Richard Ellis

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-2 and 4 remain for examination.
2. It is noted that applicant's amendment fails to comply with the requirements of 37 CFR 1.121 which became mandatory on July 30, 2003. See the attached flyer for a summary of the requirements. The places where applicant's amendment fails to comply with the requirements are:
 - 2.1. pg. 2 deletion of "in" from the paragraph at page 8, line 10. As stated in the flyer, "if strikethrough cannot be easily perceived ... double brackets must be used". In this case, it is not clear that the strike through is also striking through the letter "i" in the word "in". As written, the change can be possibly taken to leave the claim stating "taken i and", which itself would be a grammatical error.
 - 2.2. pg. 3, change of "when a earlier" to "when an earlier". In this case, the strikethrough of the single letter "a" is almost invisible, therefore, double brackets should have been used. As an alternate, applicant could simply have inserted the letter n, e.g.: "an" to change "a" to "an".
 - 2.3. pg. 6, applicant's cancellation of claim 3 does not use a correct parenthetical expression. Applicant used the expression "canceled, without prejudice", however, as is clearly seen from the attached flyer: "The current status of all the claims ... must be given in a parenthetical ... using only one of the following seven status identifiers". The only allowed parenthetical for claim cancellation is "(canceled)". If applicant wishes to indicate on the record that the cancellation is without prejudice, he must do so in his remarks, not by adding text to the parenthetical expressions.
3. Additionally, applicant's paragraph replacement on pg. 4 of the amendment, replacing a paragraph at page 11 line 17 of the specification was not entered by the clerical staff because no paragraph containing the text provided is present on page 11 line 17 of the specification.
4. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office Action.

5. Claims 1 and 4 are rejected under 35 USC 102(b) as being clearly anticipated by Robinson et al., U.S. Patent 5,307,504.
6. Claims 1 and 4 are rejected under 35 USC 102(e) as being clearly anticipated by Babaian et al., U.S. Pre-Grant Publication 2002/0,092,002 A1.
7. Claims 1 and 4 are rejected under 35 USC 102(e) as being clearly anticipated by Kelly et al., U.S. Patent 5,958,061.

Robinson et al., Babaian et al., and Kelly et al. were cited as prior art references in paper number 4, mailed July 22, 2003.

8. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 4, mailed July 22, 2003.
9. Applicant's arguments filed January 26, 2004, paper number 5, have been fully considered but they are not deemed to be persuasive.
10. In the remarks, applicant argues in substance:

- 10.1. That: "Robinson fails to disclose, "beginning execution of a speculative sequence of host instructions following a branch from the first sequence of target instructions by immediately committing state and storing memory stores," as claimed ... Applicants do not understand the "y" instructions to be speculative, as claimed".

"Applicants do not understand Babaian to teach beginning the execution of a speculative sequence of host instructions following a branch by immediately committing state and storing memory stores, as claimed"

"Kelly fails to teach or suggest, "beginning execution of a speculative sequence of host instructions following a branch from the first sequence of target instructions by immediately committing state and storing memory stores," .. Kelly does not disclose that the commit occurs before a speculative sequence of host instructions that follows a branch, as claimed."

This is not found persuasive because applicant's arguments are directed to the fact that applicant does not see that any of the three references relate to "speculative" execution of instructions. However, as seen from applicant's own specification, one possible definition for "speculative" execution is:

"If an exception occurs during the execution of the sequence of host instructions which have been translated, processing stops; and the entire operation may be returned or rolled back to the beginning of the sequence of target instructions at which known state of the target processor exists. This allows very rapid and accurate handling of

exceptions while dynamically translating and executing instructions.

It will be noted that the method by which the new microprocessor handles the execution of translations by placing the effects in temporary storage until execution has been completed successfully is effectively a rapid method of speculating" pg. 2, lines 12-21.

As seen from this section of the specification, applicant's themselves have defined speculation to mean the temporary storage of results until execution has completed successfully (i.e., without exceptions). This is exactly what Robinson et al. performs in their system at col. 7 line 4 to col. 8 line 19. Specifically, see col. 7 lines 38-60 and col. 8 lines 3-19.

As to Babaian et al., this reference also performs exactly applicant's definition of speculation. At paragraph 0044 Babaian et al. discloses that temporary state is checkpointed for use in a rollback situation (called recovery by Babaian et al.). At paragraph 0063 Babaian et al. both indicates that the system operates as per applicant's definition of speculation, i.e., storing temporary results until no exceptions occur, while simultaneously referring to the operation as "speculative mode" (paragraph 0063, lines 4 et seq.).

As to Kelly et al., applicant's own arguments clearly show that applicant recognized that Kelly et al. performs exactly as applicant has defined speculation:

"Kelly may teach that a commit operation is performed after a sequence of host instructions executes without an exception occurring. For example, Kelly at col. 12, line 58 et seq. may disclose that a commit occurs after one or a group of target instructions has been translated and run without error." (applicant's remarks, pg. 12, paper number 5, received January 26, 2004)

Therefore, by applicant's own admission, Kelly et al. performs exactly applicant's definition of speculation, that of holding results until execution completes successfully.

Accordingly, as seen above, all three references do indeed provide for speculative execution to the extent that applicant's specification has provided any definition of speculative execution to the claim language.

11. Claim 2 is objected to as being dependent upon a rejected base claim, but would render the base claim allowable if bodily incorporated into the base claim such that the new base claim included all of the original limitations of the base claim, any intervening claims, and the objected claim.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.


A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (703) 305-9690. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Richard Ellis
February 10, 2004



RICHARD L. ELLIS
PRIMARY EXAMINER

REVISED AMENDMENT PRACTICE: 37 CFR 1.121 CHANGED COMPLIANCE IS MANDATORY - Effective Date: July 30, 2003

All amendments filed on or after the effective date noted above must comply with revised 37 CFR 1.121. See Final Rule: **Changes To Implement Electronic Maintenance of Official Patent Application Records** (68 *Fed. Reg.* 38611 (June 30, 2003), posted on the Office's website at: <http://www.uspto.gov/web/patents/ifw/> with related information. The amendment practice set forth in revised 37 CFR 1.121, and described below, replaces the voluntary revised amendment format available to applicants since February 2003. **NOTE: STRICT COMPLIANCE WITH THE REVISED 37 CFR 1.121 IS REQUIRED AS OF THE EFFECTIVE DATE (July 30, 2003).** The Office will notify applicants of amendments that are not accepted because they do not comply with revised 37 CFR 1.121 via a Notice of Non-Compliant Amendment. See MPEP 714.03 (Rev. 1, Feb. 2003). The non-compliant section(s) will have to be corrected and the entire corrected section(s) resubmitted within a set period.

Bold underlined italic font has been used below to highlight the major differences between the revised 37 CFR 1.121 and the voluntary revised amendment format that applicants could use since February, 2003.

Note: The amendment practice for reissues and reexamination proceedings, except for drawings, has not changed.

REVISED AMENDMENT PRACTICE

I. Begin each section of an amendment document on a separate sheet:

Each section of an amendment document (e.g., Specification Amendments, Claim Amendments, Drawing Amendments, and Remarks) must begin on a separate sheet. Starting each separate section on a new page will facilitate the process of separately indexing and scanning each section of an amendment document for placement in an image file wrapper.

II. Two versions of amended part(s) no longer required:

37 CFR 1.121 has been revised to **no longer require** two versions (a clean version and a marked up version) of each replacement paragraph or section, or amended claim. Note, however, the requirements for a clean version and a marked up version for **substitute specifications** under 37 CFR 1.125 have been retained.

A) Amendments to the claims:

Each amendment document that includes a change to an existing claim, cancellation of a claim or submission of a new claim, **must include a complete listing** of all claims in the application. After each claim number in the listing, the status must be indicated in a parenthetical expression, and **the text of each pending claim** (with markings to show **current** changes) must be presented. The claims in the listing will replace all prior claims in the application.

- (1) The current status of all of the claims in the application, including any previously canceled, not entered or withdrawn claims, must be given in a parenthetical expression following the claim number using only one of the following seven status identifiers: (original), (currently amended), (canceled), (withdrawn), (new), **(previously presented) and (not entered)**. The text of all pending claims, **including withdrawn claims**, must be submitted each time any claim is amended. Canceled **and not entered** claims must be indicated by only the claim number and status, without presenting the text of the claims.
- (2) The text of all claims **being currently amended** must be presented in the claim listing with markings to indicate the changes that have been made relative to the immediate prior version. The changes in any amended claim must be shown by underlining (for added matter) or strikethrough (for deleted matter) with 2 exceptions: (1) for **deletion of five characters or fewer, double brackets may be used (e.g., [[eroor]])**; and (2) if **strikethrough cannot be easily perceived (e.g., deletion of the number "4" or certain punctuation marks), double brackets must be used (e.g., [[4]])**. **As an alternative to using double brackets, however, extra portions of text may be included before and after text being deleted, all in strikethrough, followed by including and underlining the extra text with the desired change (e.g., ~~number 4~~ as number 14 as).** An accompanying clean version is not required and should not be presented. Only claims of the status "currently amended," and "withdrawn" that are being amended, may include markings.
- (3) The text of pending claims **not being currently amended, including withdrawn claims**, must be presented in the claim listing in clean version, i.e., without any markings. Any claim text presented in clean version will constitute an assertion that it has not been changed relative to the immediate prior version except to omit markings that may have been present in the immediate prior version of the claims.

- (4) A claim being canceled must be listed in the claim listing with the status identifier “canceled”; the text of the claim must not be presented. Providing an instruction to cancel is optional.
- (5) Any claims added by amendment must be presented in the claim listing with the status identifier “(new)”; the text of the claim must not be underlined.
- (6) All of the claims in the claim listing must be presented in ascending numerical order. Consecutive canceled, or not entered, claims may be aggregated into one statement (e.g., Claims 1 – 5 (canceled)).

Example of listing of claims (use of the word “claim” before the claim number is optional):

Claims 1-5 (canceled)

Claim 6 (previously presented): A bucket with a handle.

Claim 7 (withdrawn): A handle comprising an elongated wire.

Claim 8 (withdrawn): The handle of claim 7 further comprising a plastic grip.

Claim 9 (currently amended): A bucket with a ~~green~~ blue handle.

Claim 10 (original): The bucket of claim 9 wherein the handle is made of wood.

Claim 11 (canceled)

Claim 12 (not entered)

Claim 13 (new): A bucket with plastic sides and bottom.

B) Amendments to the specification:

Amendments to the specification, including the abstract, must be made by presenting a replacement paragraph or section or abstract marked up to show changes made relative to the immediate prior version. An accompanying clean version is not required and should not be presented. Newly added paragraphs or sections, including a new abstract (instead of a replacement abstract), must not be underlined. A replacement or new abstract must be submitted on a separate sheet, 37 CFR 1.72. If a substitute specification is being submitted to incorporate extensive amendments, both a clean version (which will be entered) and a marked up version must be submitted as per 37 CFR 1.125.

The changes in any replacement paragraph or section, or substitute specification must be shown by underlining (for added matter) or strikethrough (for deleted matter) with 2 exceptions: (1) for deletion of five characters or fewer, double brackets may be used (e.g., [[error]]); and (2) if strikethrough cannot be easily perceived (e.g., deletion of the number “4” or certain punctuation marks), double brackets must be used (e.g., [[4]]). As an alternative to using double brackets, however, extra portions of text may be included before and after text being deleted, all in strikethrough, followed by including and underlining the extra text with the desired change (e.g., number 4 as number 14 as)

C) Amendments to drawing figures:

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment, and may be accompanied by a marked-up copy of one or more of the figures being amended, with annotations. Any replacement drawing sheet must be identified in the top margin as “Replacement Sheet” and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. Any marked-up (annotated) copy showing changes must be labeled “Annotated Marked-up Drawings” and accompany the replacement sheet in the amendment (e.g., as an appendix).

The figure or figure number of the amended drawing(s) must not be labeled as “amended.” If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Questions regarding the submission of amendments pursuant to the revised practice set forth in this flyer should be directed to: Elizabeth Dougherty or Gena Jones, Legal Advisors, or Joe Narcavage, Senior Special Projects Examiner, Office of Patent Legal Administration, by e-mail to patentpractice@uspto.gov or by phone at (703) 305-1616.